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AUTHOR	Kramer, Michael W.; Pier, P. M.
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ABSTRACT

The first phase of this research used focus groups of current students to identify characteristics of effective and ineffective teachers. The second phase used q-methodology to have students holistically describe effective and ineffective teachers in small and large classes. Results suggest that there are different types of effective and ineffective teachers rather than one type and that there are few differences between teachers of small and large classes. Overall, findings suggest reconsideration of the process-product paradigm prevalent in teacher effectiveness research, since the combination of behaviors appears more important in determining teacher effectiveness than specific behaviors. (Contains 20 references; a list of focus group questions, a list of characteristics of effective and ineffective teachers, and 5 tables of data are appended.) (Author)

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A Holistic Examination of Students' Perceptions of Effective and Ineffective Communication by College Teachers

by

Michael W. Kramer

and

P.M. Pier

Contact First Author at:

Michael W. Kramer
Ph.D. University of Texas, 1991
Department of Communication
College of Arts and Science
University of Missouri--Columbia
Campus Address: 115 Switzler Hall
Office Phone: 573-882-6980
FAX: 573-884-5672
E-Mail: commmwk@showme.missouri.edu

P.M. Pier
M.A. Southwest Missouri State
Department of Communication
University of Missouri--Columbia

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A Holistic Examination of Students' Perceptions of Effective and Ineffective Communication by College Teachers

Abstract

The first phase of this research used focus groups of current students to identify characteristics of effective and ineffective teachers. The second phase used q-methodology to have students holistically describe effective and ineffective teachers in small and large classes. Results suggest that there are different types of effective and ineffective teachers rather than one type and that there are few differences between teachers of small and large classes. Overall, findings suggest reconsideration of the process-product paradigm prevalent in teacher effectiveness research since the combination of behaviors appears more important in determining teacher effectiveness than specific behaviors.

Keywords: teacher effectiveness, focus groups, q-methodology

A Holistic Examination of Students' Perceptions of Effective and Ineffective Communication by College Teachers

Concern about the characteristics of effective teachers has generated over 1000 published studies (Nussbaum, 1992). These studies have provided valuable insights into specific teaching behaviors. Despite this, the research has a number of limitations. First, researchers frequently define the characteristics of effective teaching rather than having current students identify those behaviors. More research is needed based on student concerns. Second, the various characteristics thought to be related to teacher effectiveness have generally been examined independently rather than simultaneously. Additional research is needed that examines the combination of behaviors. Third, while research suggests that context has an important role in teacher effectiveness, previous research has frequently not differentiated between small and large classes. More comparisons of effective teaching in small classes versus large lectures at the college level are needed. This research contributes to the teacher effectiveness literature by addressing these issues. It relies on students to determine which behaviors are salient in their perceptions of teacher effectiveness; it examines holistically the combination of behaviors; and it differentiates between small and large classes at the college level of instruction.

Critique of Literature

This discussion does not attempt to summarize the previous literature since high quality summary articles already exist in both the field of speech communication education (Staton-Spicer & Wulff, 1984; Nussbaum, 1992) and the field of education (e.g., Brophy, 1979; Brophy & Good, 1986). Specific reviews even focus exclusively on college-level instruction (e.g., Dunkin & Barnes, 1986). Instead of reviewing these again, a number of conclusions and limitations identified in the previous research will be highlighted.

With few exceptions, most teacher effectiveness studies have been based on the process-product research paradigm (Shulman, 1986). This approach presumes that there is a direct link between specific communication behaviors

of teachers and instructional outcomes. This research has generally concluded that discrete behaviors, such as frequency and intensity of praise, frequency and type of teacher questioning, duration of wait time, various indicators of teacher enthusiasm, clarity, use of humor, and immediacy all potentially impact student outcomes (Nussbaum, 1993). Instructional outcomes examined most often have been cognitive learning (e.g., test scores in Bettencourt, Gillett, Gall, & Hull, 1983), but have also included affective results (e.g., liking the course or instructor in Andersen, 1979) and behavioral intent (e.g., likelihood of using skills learned in Kearney & McCroskey, 1980).

A limitation to this research is that researchers typically determined which traits and outcomes should differentiate effective from ineffective college teachers, and then verified their expectations in their research. For example, Nussbaum and Scott (1979) expected that teacher communication style, (i.e., being relaxed, friendly, and animated) would distinguish effective teachers from ineffective ones and impact students' affect toward the behaviors taught, intent to enact the behaviors, and knowledge on the exam. Students in their study verified some of these expected relationships. This reliance on researcher-identified traits may create demand characteristics in the design since a trait becomes salient by its presence on the questionnaire rather than by its inherent importance to respondents. Unless researchers carefully mask the nature of the studies, respondents easily identify the "appropriate" variables creating response bias (Norton & Nussbaum, 1980).

In an example of an exception to this approach, Kearney, Plax, Hays, and Ivey (1991) had students generate characteristics of ineffective college teachers. They found that incompetence (e.g., unclear, information overload, lack of knowledge), offensiveness (e.g., verbal abuse, bias, arbitrariness), and indolence (e.g., absence, lateness returning papers, disorganization) typified ineffective teachers. These are quite different behaviors than those generated by researchers. However, since that study only examined ineffective behaviors, this study examines the broader question:

RQ1: What do students identify as communication characteristics of

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effective and ineffective college teachers?

Another limitation to the research is that it has typically analyzed behaviors in isolation rather than examining the combination of a broad set of behaviors. Studies frequently isolate one behavior, such as teacher wait time during question and answer periods (Tobin, 1986). Even studies using broad constructs such as teacher style (e.g., Kearney & McCroskey, 1980) or teacher immediacy (e.g., Rodriguez, Plax & Kearney, 1996) do not examine instructional behavior in a global sense that considers message content, as well as verbal and nonverbal behaviors. While isolating specific variables is valuable, results from attempts to aggregate specific behaviors have not been consistent with the individual studies, and there is no evidence that recommendations resulting from combining individual studies represent any naturally occurring teacher behaviors (Shulman, 1986). Moreover, the work on behaviors of ineffective teachers (Kearney et al., 1991) suggests that effective teachers may be defined more by the absence of certain behaviors (i.e., not expressiing negative attitudes toward students) than by particular behaviors like humor or dramatic style. In addition, there is an implicit assumption that effective teachers share the same traits, rather than considering the possibility that various combinations of behaviors may be equally effective. Overall, the need to examine the combination of behaviors suggests the second question:

RQ2: What combinations of characteristics do students use to describe effective and ineffective college teachers?

The research on teacher effectiveness has also frequently ignored the instructional context or setting, although models of effective teaching typically include context as important (Shulman, 1986). Some research into college teaching has considered course content an important aspect of context, noting the differential impact of certain behaviors in different subject areas (e.g., Dunkin & Barnes, 1986), but the impact of class size as a component of context has often been ignored. In an exception to this, Moore, Masterson, Christophel, and Shea, (1996) found that teacher immediacy ratings were significantly higher in small classes than in large ones, but then failed to

control for class size in their futher analysis associating teacher immediacy with certain effective teaching behaviors. Further examination of the importance of class size is needed. This leads to the final question:

RQ3: Do the characteristics of effective and ineffective college teaching vary according to class size (small versus mass lecture)?

Methodology

Subjects

Participants in the study were students enrolled in an undergraduate basic communication course at a large midwestern university. Students participated in the research as an option to meet a course requirement for outside research. Because the course is required by a variety of departments and is an elective for others, the course draws a wide range of students. Respondents included Sophomores (16%), Juniors (41%), Seniors (38%) and a few graduate students (4%). They were 68% female and 32% male. They ranged in age from 18-49 with a mean of 21.8. They represented numerous majors, with education (25%), business/accounting (11%), sciences (6%), engineering (6%), and hotel/restaurant management (6%) being the most common.

Procedure

The research was conducted in two phases. The first phase used student focus groups to identify behaviors that generally characterized effective and ineffective teachers. In this way students generated the items used in the research instead of the researchers. In the second phase other students used q-methodology to describe specific experiences with effective and ineffective teachers. Q-methodology is a particularly effective way to systematically study human subjectivity because respondents must prioritize their responses, thereby reducing response bias concerns (McKeown & Thomas, 1988).

In the first phase, 7 focus groups were formed with 3-6 members (33 students) from two randomly selected sections. Using open-ended questions (See Appendix A), students were asked to describe the behaviors of effective and ineffective teachers in small and large classes. Focus groups are an effective way to gather data from a target population because ideas that would

not otherwise have been considered are generated through group interaction, but the small group size allows for all to participate (Morgan, 1988).

Transcripts of the taped group interactions were used to generate a thorough list of effective and ineffective behaviors and important outcomes. Using content analysis (Krippendorff, 1984), two judges independently coded the transcripts into categories or themes that emerged from the data rather than into preconceived categories. The judges identified 104 behaviors or themes in the students' responses. Of those, both judges identified 97 of the same themes (See Table 1). This indicates an intercoder reliability of 93% for simple agreement on identification of themes. This analysis also indicated that the sixth group provided only four new themes and that there were no new themes generated by the seventh group. This suggests that most of the major themes and behaviors had been identified.

Since q-methodology used in the second phase of the research generally recommends that 40-60 items be used, it was necessary to reduce the number of themes. This was done by selecting only those themes that were mentioned in at least half (4) of the focus groups and then combining some that were frequently mentioned in combination with each other (e.g., enthusiastic and enjoys teaching) or eliminating others because they were the logical opposite of each other (e.g., humorous--not funny). Statements typical of each behavior or theme were then generated. This resulted in the set of 54 items used for the q-sort in the second phase of the research indicated in Table 1.

In the second phase of data collection, the remaining students (126) completed two q-sorts based on the characteristics generated in the first phase, one describing an effective teacher and one an ineffective teacher. Approximately half of the students (n=62) described teachers from small classes and half (n=64) those in large classes. The q-sort involved arranging the characteristics along a continuum from those that they most strongly agreed described the teacher to those they most strongly disagreed described him or her. Respondents placed the characteristics in a forced distribution resembling a bell-curved array of rankings such that there are few responses

at either end of the continuum and the most in the middle.

The q-sorts were then subjected to a q-factor analysis in which each q-sort or case is treated as a variable unlike the traditional r-factor analysis in which the items are treated as variables (Stephenson, 1953). In this way, cases which are very similar are grouped together to create factors. The cases that factor together indicate similarities in the clusters of behaviors that are most important to students' perceptions of the teachers they described. The analysis also generates z-scores for each item in each factor. This makes it possible to determine which particular items characterized the factor or type of teacher because of either their high positive or high negative scores and allows for identification of items on which there was consensus or variation across factors or types.

The teachers described by students had the following demographics. The gender mix of effective (62% male, 38% female) and ineffective (67% male, 33% female) teachers were similar. Their estimated ages were also similar with effective teachers reported as 48% young (20-35), 35% middle-aged (36-50), and 16% older (51+) and ineffective teachers reported as 37% young, 30% middle aged, and 32% older. They represented similar percentages of a wide range of courses for effective versus ineffective teachers, including sciences (21%-21%), humanities (17%-12%), mathematics or statistics (10%-18%), business or economics (6%-17%), social sciences (6%-8%), health sciences (6%-2%), fine arts (6%-2%) and communication (6%-1%). Overall, this suggests demographic characteristics were not significantly associated with teacher effectiveness.

Results

RQ1: Characteristics of Effective and Ineffective Teachers.

The 97 themes identified in the focus group transcripts suggested several broad categories of behaviors and outcomes that characterized effective and ineffective teachers (See Table 1). The data suggest that there are clear contrasts between effective and ineffective teachers in each area.

While both types were often perceived as knowledgeable, effective teachers were characterized as using a variety of teaching methods in a

logical progression. Ineffective ones presented material in an order that did not make sense to students. Effective teachers were energetic and enthusiastic about teaching while ineffective ones generally created mundane class periods. Effective teachers made clear connections between class activities, reading materials, and tests. With ineffective teachers, the connections between these were not apparent and students felt left on their own to learn. Effective teachers seemed casual and approachable while ineffective ones were often either arrogant and condescending or unapproachable. Effective teachers had frequent interactions with their students before, during, and after class and were available at other times; ineffective ones seemed to avoid interactions or be defensive during interactions. Finally, students felt they learned more than just the content from effective teachers, such as an appreciation of the subject; they frequently reported learning little or nothing from ineffective ones.

RQ2: Combinations of Behaviors of Effective and Ineffective Teachers.

Four separate q-factor analyses were conducted for teachers of effective small classes, effective large classes, ineffective small classes, and ineffective large classes. This allowed for a focused analysis for type and context, but was also necessary due to size restrictions of the QUANL program used. In each case, results suggested three to five types or combinations of behaviors that described effective or ineffective teachers. Tables 2-5 provide a complete listing of the items that characterized each type including the Z-scores. General descriptions of the various types follow rather than complete characterization based on all the items.

Effective Small Class Teachers. The q-factor analyses suggested three different types of effective teachers in small classes (See Table 2). The item analysis indicated that there was general consensus for all of the effective small class teachers on several items. All three types were described as energetic (1.33), approachable (1.17) and not dull (-1.23). They were concerned about student learning (1.36) and provided individual attention as needed (1.07). They frequently used stories and examples (1.17)

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while creating a comfortable climate (1.09). They did not avoid eye contact with students (-1.06), did not put them down when they asked questions (-1.40), and were not difficult to hear or understand (-1.19).

In addition to these characteristics shared by all the effective small class teachers, the most common type of effective teacher in the small classes (48 of 62 or 77%) was characterized as the interpersonal-interactive teacher. A cluster of behaviors concerning frequency and quality of interactions with students differentiated this type from other effective teachers. Specifically, they asked for students' ideas, opinions, or responses (1.32), used discussion (.96) and knew students' names (1.16). They were not standoffish or condescending (-1.66), and did not avoid interaction with students (-1.33). They were down to earth (1.24) and perceived as knowledgeable. They used humor (1.01) and personal stories (1.00).

The second type of effective small class teacher (7 or 11%) was the structured lecturer. These teachers were defined primarily by items that indicated they were knowledgeable, organized lecturers. Specifically, they were perceived as knowledgeable (1.99). They provided a syllabus which they followed (1.86). They were characterized as knowing students by name (1.49) and being available outside of class (1.71), but they primarily lectured (1.33) even in the small classes. They made clear connections between the class periods, the readings, and tests (1.49) and made it clear what would be on tests (1.23). They did not seem to prefer research to teaching (-1.18).

The third type of effective small class teacher was the synthesizing teacher (7 or 11%). The defining characteristics of these teachers were their ability to make connections in their teaching, but they were not described as either discussion leaders (-.24) or lecturers (-.43). These teachers made connections between the class periods, readings, and tests (1.67) and made it clear what would and would not be on tests (2.19), so that students did not feel they had to learn on their own (-1.62). They were down to earth (1.46). They gave fair tests (-1.11) that tested general concepts, not specific details (1.14). They used humor (1.00) and were available outside of class

(1.00). They also did not prefer research to teaching (-1.00).

Effective Large Class Teachers. The analysis of the effective teachers of large classes indicated there were four different effective types. There was consensus among the four types on a number of items. All of the effective large class teachers were described as energetic (1.83), not dull (-1.15), knowledgeable (1.75), casual and approachable (1.36), and humorous (1.10). They provided and followed a syllabus (1.12) and created a comfortable climate (1.08) where students did not feel they learned little (-1.59).

The most common type of effective teacher of the large classes (45 of 64 or 70%) was the student-centered teacher. Students primarily described these instructors on the basis of the consensus items above and items showing positive regard for students. Specifically, they were described as understanding where students were coming from (1.27), being concerned about student learning (1.26), and not putting students down for asking questions (-1.50). They were not standoffish (-1.60) and despite the large classes, they frequently asked students for their ideas (1.06). They used personal stories or examples (1.12) and made it clear what would be tested (1.00). They did not avoid eye contact (-1.16) or speak in a monotone (-1.10).

The second type of effective teacher of the large class was the eloquent lecturer (8 or 12%). Again, these teachers were essentially defined by the consensus items and their competence as lecturers. They primarily lectured (1.58), but were not difficult to understand (-1.92), did not avoid eye contact (-1.35), did not read from notes (-1.21) or speak in a monotone (-.98). They did not lack knowledge or confidence (-2.35) and did not ignore the syllabus (-1.38). However, they did not divide the class into small groups (-1.54) or know students by name (-1.18). They helped students to appreciate the subject and the instructor (1.46).

The third type of effective large class instructor was the synthesizing teacher (9 or 14%). These instructors were primarily defined by their ability to make connections in their teaching. Specifically, while they primarily lectured (1.33), students described them as making connections between class,

readings, and tests (1.48), making it clear what would be tested (1.33), and applying the material to students' lives (1.45). They were concerned about student learning (1.38), did not put students down for asking questions (-1.14), and understood where students were coming from (1.55). Students learned to appreciate the subject and the instructor (1.74).

The fourth type of effective teacher was the subject-inspiring teacher (2 or 3%). For these teachers, students particularly noted that they learned to appreciate the subject and instructor (1.97) while learning to apply the information to their lives (1.18). These teachers seemed to understand where students were coming from (1.58) and students were not on their own to learn (-1.58). They used personal stories and examples (1.18) and did not seem to prefer research to teaching (-1.18). These teachers were not standoffish (-1.97), did not put students down for asking questions (-1.18), and were not unavailable to students before and after class (-1.18). They did not avoid eye contact (-1.97) or speak in a monotone (-1.58).

Ineffective Small Class Teachers. The analysis of the ineffective teachers of small classes indicated five different types of ineffective teachers. There was far less consensus about ineffective teachers. However, all the ineffective teachers were described as not concerned about student learning (-1.25), not interacting much with students (.86), not down to earth with students (-.83), and not using humor in class (-1.08).

The most common ineffective large class teacher, the distant-abrasive teacher (31 of 62 or 50%), was characterized by items suggesting they expressed negative attitudes when interacting with students. They seemed standoffish or condescending (1.51) and put students down when they asked questions (1.36). They did not seem approachable (-1.45), did not provide individual attention (-1.01), and were not available outside of class (-1.04). In addition, they lacked confidence (1.12) and energy (-1.71), spoke in a monotone (1.13), were dry or dull (1.35) and difficult to understand (1.28). Students felt they learned very little (1.39), and did not appreciate the subject or the teacher by the end of the class (-1.32).

The second type of ineffective teacher in a small class (13 or 21%) was the reader. These teachers were primarily note for their poor delivery. These teachers were dry or dull (2.38) and not energetic (-1.87). They primarily lectured (1.90) without audio-visual aids (-1.09) and seemed to read notes most of the time (1.49) in a monotone voice (1.61). They seemed unaware of students (1.49). These instructors seemed knowledgeable (1.60), followed a syllabus (1.44) and did not put students down for asking questions (-1.09). The students felt they learned little (2.03), except that they did not like the subject (1.45) or appreciate the instructor (-1.03) and did not know how to apply the subject to their lives (-1.36).

The third type of ineffective teacher was the unrealistic expectations teacher (13 or 21%). A cluster of behaviors suggest that students felt these teachers expected too much. According to students, these teachers expected them to know or do too much (2.10), left them to learn on their own (1.37), covered too much material (1.42), and gave tests that were too difficult (1.44). They seemed standoffish or condescending (1.34) and did not create a comfortable climate (-1.66). While they seemed knowledgeable (1.18) and followed their syllabus (1.14), they were difficult to hear or understand (2.12). Students learned that they did not like the subject (1.71) and did not appreciate the instructor (-1.86).

The fourth type of ineffective teacher was the unavailable teacher (3 or 5%) who were characterized as inaccessible to students. According to students, these teachers did not return calls (1.90), were not available before or after class (1.65) or during office hours (-1.31), did not provide individual attention (-1.22) and seemed to prefer research to teaching (1.52). They seemed standoffish or condescending (2.11), not approachable (-1.57), put students down when they asked questions (1.77), and seemed unaware of students' responses (-1.46). While they seemed knowledgeable (1.44), students felt they were on their own to learn (1.42) and learned very little (1.99), although surprisingly they did not learn to dislike the subject (-1.22).

The last type of ineffective small class teacher was the tedious teacher

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(2 or 3%). While having a number of positive attributes, the class periods were predictable and poorly presented. These instructors primarily lectured (1.97), were not energetic (-1.58) and were dry or dull (1.58). They did not use examples (-1.18) or demonstrations (-1.18). They did not ask students for opinions (-1.58), use discussion (-1.18), or use small groups (-1.97). However, they made clear connections between class, readings, and tests (1.97). They knew students by name (1.58), but did not provide individual attention (-1.97) and seemed to put students down when they asked questions (1.58). They seemed to prefer research to teaching (1.18).

Ineffective Large Class Teachers. The analysis of the ineffective large class teachers indicated that there were five types of these teachers. However, there were no items of consensus with z-scores greater than +/-.70.

The first type of ineffective teacher was the distant, awkward teacher (18 of 64 or 28%) who seemed to have negative attitudes about interacting with students. These teachers were described as not concerned about student learning (-2.01), putting students down for asking questions (1.55), not approachable (-1.07), and standoffish or condescending (1.18). They did not create a comfortable climate (-1.69) or know students by name (-1.26). Their presentations were dry or dull (1.75), not energetic (-1.36) and difficult to understand (1.66). The instructors did not seem confident or knowledgeable (-1.14). Students felt they learned little and that these teachers expected too much (1.20) and left them on their own to learn (1.45).

The second type of ineffective large class teacher was the unclear and unrealistic expectations teacher (17 or 27%). These instructors expected a great deal, but were also unclear about those expectations. They were described as giving tests that were too hard (1.79), expecting students to know and do too much (1.47) and covering too much material (1.45). They did not make connections between class, readings, and tests (-1.34), thus, leaving students on their own to learn (1.58). These instructors, who primarily lectured (1.45), were viewed as knowledgeable (1.63). While they were viewed as colorful or unusual (1.40), students felt they learned very little (1.63)

and did not appreciate the instructor (-1.61).

The third type of ineffective large class teacher was the distant, expert teacher (20 or 31%). These teachers seemed to lack interest in interacting with students, but unlike the first type, were described as knowledgeable and competent (1.70). They primarily lectured (1.65) in a monotone voice (1.61) without using humor (-1.46). Their presentations were perceived as dry or dull (2.06) and not energetic (-1.94). These teachers did not interact with students during class (1.67) and were not aware of student responses (-1.39). They did not seem down to earth (-1.35) or concerned about student learning (-1.24). Students felt they were on their own to learn (1.41) and did not learn to appreciate the subject or instructor (-1.20).

The fourth type of ineffective large class instructor was the personable, reader (2 or 3%). These instructors were identified primarily by their poor delivery style, but had other positive attributes. They primarily lectured (1.85) by reading from notes (1.69). They were dry or dull (1.17), did not use humor (-1.17) and frequently got off on tangents (1.64). On the positive side, they included personal stories (1.39). They did not put students down for asking questions (-2.35) and frequently asked for student input (1.47). They were seen as approachable (1.63) and not standoffish (-1.81). Their expectations were not too high (-1.50) and tests were not too hard (-1.37). However, students felt they learned very little (1.63).

The last type of ineffective large class instructor was the disconnected instructor (7 or 11%) who was defined by items indicating they did not make connections between various course activities. Students felt they were on their own to learn (2.14) since the instructor did not make it clear what would be tested (-2.60) and did not make connections between class, readings, and tests (-1.67), or between the subject and students' lives (-1.79). These teachers expected too much (1.70), gave tests that were too hard (2.10), failed to test general concepts instead of specific details (-1.54). Students felt they learned very little from these instructors (2.12), except that they did not like the subject (1.55) and did not appreciate the instructor (-1.98).

RQ3: Differences in Teachers in Small and Large Classes:

The similarities in some of the descriptors in the previous results suggest that there may be few differences between effective and ineffective teachers in small and large classes since the significant descriptors are frequently similar. In order to examine this, those cases from small and large classes which appeared quite similar were pooled and analyzed together to see if the size of the class was a significant factor.

Effective Teachers. Analysis of the interpersonal teachers from small classes and student-oriented teachers from large classes suggests that these were two different types of teachers and that class size was a contributing factor. A two factor solution indicated that 71% of the first type were the small class, interpersonal-interactive teachers and 83% of the second type were the large class student-oriented teachers. Both types were knowledgeable, energetic, and concerned about student learning. Both did not put students down and were not condescending or standoffish. Interpersonal teachers were characterized as much more likely to know students by name, and somewhat more likely to ask students' for their opinions, and interact with students. The student-oriented teachers were characterized as more likely to lecture, follow a syllabus closely, and make it clear what would be tested.

Analysis of the lecturers from small and large classes indicated that there may be two types of effective lecturers, but that size was not the determining factor. One type tended to be more available outside of class and make clearer connections between the class periods, readings, and tests. The second type was more likely to be a bit colorful and use demonstrations, but interacted less with the students. However, there was a significant mix of teachers from small and large classes in both of these types.

Analysis of the synthesizing teachers from both small and large classes indicated that a single factor or type existed. This suggests that the synthesizing teacher is not significantly different in a small or large class.

Ineffective Teachers. An analysis of the distant-abrasive teachers from small classes and distant-awkward and distant-expert from large classes

suggested that these were primarily two types. All of these teachers were perceived as not concerned about student learning, not aware or interacting with students, not approachable, dry and dull, lacking in energy, and as giving tests that were too hard. The first type was the distant-awkward type who was perceived as lacking knowledge and confidence, primarily lecturing, and preferring research to teaching. The second type was the distant-abrasive-expert who was perceived as knowledgeable and organized, but who was standoffish and condescending and put students down for asking questions. The first type was a mix of small (63%) and large (37%) class teachers, but the second type was predominately large class teachers (85%). Together this suggests that size was perhaps a contributing factor to these two types.

Analysis of the unrealistic expectations teachers from the small classes and unclear and unrealistic expectations from the large classes revealed that these were two different types of teachers and that size apparently was a factor. The first type, unclear and unrealistic was almost exclusively large class teachers (94%), while the second type were predominately from small classes (86%). Students perceived both as having too high expectations, covering too much material, and giving tests that were too hard. However, the large class teachers made fewer connections between class and tests, got off on tangents more often, asked for student opinions less frequently, were less clear about what would be tested, but seemed more knowledgeable and confident. The small class teachers used less humor, fewer personal or other examples, fewer visual aids, were dry or dull, were significantly harder to understand, and despite the small class size, used discussion and small groups less often.

The analysis of the readers suggests that size was not an issue. However, since there were so few readers in large classes (2) compared to small classes (13), these results are inconclusive, at best. There may be two different types of readers. They all fail to help students apply the subject to their lives or teach an appreciation of the subject, and all primarily lecture, were dry or dull, did not use humor, were unaware of and did not interact with students. One type was perceived as more knowledgeable and

competent, but less concerned about student learning and less enthusiastic. The other type was less down to earth, more standoffish, got off on tangents more often, made fewer connections between the class, readings, and tests, but was more likely to know students by name.

Discussion

This research addresses three limitations of much of the previous research on teacher effectiveness. First, it used focus groups to determine which behaviors are salient in current students' perceptions of teacher effectiveness rather than relying on researcher-identified traits. Second, instead of analyzing specific teacher behaviors, through q-methodology, it examined holistically the combination of behaviors that characterize effective teachers and ineffective teachers. Finally, it examined differences between effective and ineffective teachers in small and large classes.

Much of the research on teacher effectiveness has focused on analyzing communication behaviors identified by researchers rather than students. Research on teacher misbehaviors by Kearney et al. (1991) suggests that teacher behaviors that are salient to students' may be different than those identified by researchers. The results here suggest that some of same issues are important to students and researchers. For example, being energetic and using stories or examples seemed to differentiate effective teachers from ineffective ones, although humor was not universally important. There are also similarities between the characteristics of ineffective teachers identified here and those defined as misbehaviors by Kearney et al. (1991), for example, incompetence (e.g., information overload, lack of knowledge), offensiveness (e.g., verbal abuse), and indolence (e.g., disorganization).

In addition to these specific behaviors, results suggest there are also significant content and attitudinal issues that impact teacher effectiveness that are salient to students but that have not been explored by previous research. For example, concerning the content of the communication, some effective teachers make clearer connections between class discussions and lectures, readings, and tests. In focus groups, students describing

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ineffective teachers complained about doing readings that were unrelated to class periods and taking tests that were unrelated to either one or the other or both. Effective teachers related the materials to students' lives better. Concerning the attitude communicated, some ineffective teachers expressed a condescending attitude, others a lack of concern for students, and others a disinterest in teaching compared to research. Effective teachers apparently clearly communicate their interest in students. These content and attitudinal concerns are not the micro-communication behaviors examined in most previous research. While it is likely that teachers can be trained to make connections between the educational activities, it seems unlikely that teachers can learn to "fake" positive attitudes by learning specific behaviors such as telling more personal stories or moving around the room more. Improving teacher effectiveness may involve more content and attitudinal issues than simply learning specific communication behaviors.

The finding that there are a few types of effective teachers and several types of ineffective teachers has a number of implications. The results may suggest that there are more ways of being ineffective than effective. More importantly, the presence of several types of effective and ineffective teachers challenges the process-product paradigm that has dominated nearly all teacher effectiveness research and the resulting training (Shulman, 1986). Implicit in this paradigm is the notion that the presence or absence of certain behaviors distinguishes effective from ineffective teachers. These results suggest otherwise. The dynamic interaction of various communication behaviors of teachers makes them effective and apparently a number of different combinations are perceived as effective by students. In fact, given research associating student learning styles with preferences for teaching styles (e.g., Potter & Emanuel, 1991), it seems likely that the same combinations may be effective with some students and ineffective with others.

The process-product paradigm has also limited the examination of outcomes generally to outcomes like cognitive learning (e.g., Bettencourt et al., 1983), but has included affective results (e.g., Andersen, 1979) and

behavioral intent (e.g., Kearney & McCroskey, 1980). Results here suggest that ineffective teachers, some who feel strongly about researching in their field, may actually be doing a disservice to their discipline by creating ill-will toward their subject. Clearly, the process-product paradigm that pervades current research on teacher effectiveness needs to be reconsidered.

A surprising result was that there were few differences between teachers of small and large classes. Two types of effective teachers, "synthesizers" and "lecturers," were described with virtually the same characteristics in both small and large classes. Likewise, ineffective teachers characterized as "readers" or "distant-awkward" did not differ by class size. This suggests that many teachers fail to take advantage of the options available as a result of class size.

Other results do suggest that there are some differences by class size. While sharing many of the same characteristics, the interpersonal-interactive small class teachers knew students by name, asked for their opinions, and interacted with them more during class while student-centered large class teachers lectured more and provided more structure to class through the syllabus and test preparation. Similarly, some differences appear to exist between how teachers with unrealistic expectations operate in small and large classes. One type of effective teacher appeared only in large classes (subject-inspiring). Two types of ineffective teachers appeared only in small classes (unavailable and tedious). Given the small numbers of examples for each of these types, further research is needed to determine the extent to which these types represent differences between small and large class teachers or are simply sample characteristics.

Limitations:

A number of limitations are apparent from this analysis. All the data were students' perceptions of behaviors rather than observations of teachers' actual communication behaviors. "Presumably, those perceptions are accurate in that they reflect the actual processes engaged in by the teachers," (Dunkin & Barnes, 1986, p. 769) making their use justified. However, while it might

be argued that students' perceptions are more important than the actual behaviors, future research should attempt to determine the relationship between teacher behaviors and student perceptions particularly as it relates to how positive and negative attitudes are expressed verbally and nonverbally.

Students' perceptions of effectiveness were also the basis of the analysis rather than objective measures. Future research should examine if there is a relationship between these perceptions of effectiveness, and measures of students' learning or attitudes. While students' opinions expressed in the focus groups and open-ended questions suggest that they learned and retained more from the instructors they identified as effective than from those identified as ineffective, future research could determine if this association is real or imagined.

Conclusion:

These findings seem to have important implications for college teachers. Restricted by the process-product paradigm, too often teachers are left with the impression that they must imitate the one best model of effective teaching. These results suggest college teachers should try to develop the style of teaching that fits their approach and personality from a variety of effective approaches. Some might develop into effective interactive teachers, some lecturers, and others into synthesizing teachers. This study suggests teachers consider these options instead of favoring only one approach.

Teaching is a mixture of science and art. The history of research based on the process-product paradigm has attempted to develop a science about specific behaviors that produce more effective learning. This research suggests that students' perceptions of effective college teaching cannot be reduced to such formulas. Rather it is the art of combining a variety of communication skills that leads to effective instruction. No single combination apparently is optimal. Rather than attempting to define the best communication skills for effective instruction, future research should examine the various combinations of behaviors that can lead to effective learning.

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Appendix: Focus Group Questions

For our purposes today, think of a large college class as one of over 50 students, and perhaps over 100 students:

1. Think of the most effective teacher that you have had for such a large class. By effective, we don't mean favorite; we mean one who did a good job of being a college teacher. Without naming the individual, describe the behaviors they exhibited that made them effective:

Potential follow-up questions:

a: How did they interact or communicate with students?
b: Was there anything different about the syllabus, organization of the class, use of textbook, test, etc.?
c: Did they do anything right before or after class that made a difference?
d: Did they do anything outside of class time that made a difference?
e: What did they do that made them different?
g: Was their personality different?

2. What were the most important things that you learned from this teacher?

3. Now think of the least effective teacher that you have had for a large class. Again, without naming the individual, describe the behaviors they exhibited that made them ineffective:

Follow-up questions:

a: How did they interact or communicate with students?
b: Was there anything different about the syllabus, organization of the class, use of textbook, tests, etc.?
c: Did they do anything right before or after class that made a difference?
d: Did they do anything outside of class time that made a difference?
e: What did they do that made them different?
g: Was their personality different?

4. What were the most important things that you learned from this teacher?

Now, think of a small college class as one of under 30 students, perhaps as small as 5 or 10.

Questions 1 through 4 and the follow-up questions were repeated within the context of a small class.

Final: In addition to what you've already said, is there anything else that you feel describes an effective or ineffective college teacher?

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Table 1: Characteristics of Effective and Ineffective Teachers[1]

Teaching Methods:

Described effective teachers:

* Used A-V equipment during class
* Performed demonstrations (sometimes with students)
* Outline and notes followed a logical progression
* Used examples, stories, anecdotes
* Involved the class in group activities
Took the class outside at times

Described ineffective teachers:

* Disorganized--didn't follow outline and frequently went on tangents
Sloppy handwriting on the board

Described both:

* Primarily lectured
* Led discussions

Delivery:

Described effective teachers:

1 Was energetic and enthusiastic
1 Showed enjoys teaching
* Walked around the room
* Funny, humorous, and entertaining
Vocal variety

Described ineffective teachers:

* Talked too fast
* Covered too much material
* Covered material too slowly, too much on each idea
* Read from notes or text instead of speaking
* Spoke in a monotone
* Didn't look at class very much
* Couldn't understand or hear
Not funny
Sarcastic

Both:

Dressed unusually

Use of course materials:

Described effective teachers:

* Followed the syllabus but was flexible
* Reading materials were related or supplemental to class periods
Reading materials related to syllabus
Reading materials related to tests
Provided additional readings to help clarify topics

Described ineffective teachers:

* Didn't follow the syllabus

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2 Textbooks were completely different than class content
Didn't have a syllabus, at least not on first day
Was inflexible about following the syllabus
Had to rely on the text to learn the content
Reading materials were unrelated to tests
Reading materials were inappropriate for class

Evaluation and tests:

Described effective teachers:

* Made it clear what you need to know and not know
3 Tested broad concepts rather than minor details
Tests seemed fair--everyone could do well
Offered a variety of options for evaluation

Described ineffective teachers:

* Tests seemed unfair--either not enough time, too many items
2 Tests did not relate to class materials
* Expectations of students were too high (prior knowledge, quantity)
Had to guess what would be on the test
3 Tests were too hard, covering trivial information, not concepts
Slow returning tests and graded materials

Personality:

Described effective teachers:

* Personable, casual, and approachable
* Flexible, understanding, down to earth
* Cares about students and their learning

Described ineffective teachers:

4 Was condescending, arrogant, or intimidating
4 Seemed unapproachable, standoffish
* Didn't seem to care or want to be there--preferred research
* Seemed dull, dry, or uninteresting
* Seemed to lack necessary knowledge and experience
Seemed moody and/or negative
Was very strict
Was a push-over/whimpy

Described both:

* Knowledgeable/experienced
* Odd, colorful, crazy
Age (young or old)

Communication Interactions:

Described effective teachers:

5 Had frequent interactions with students
* Frequently asked for input, responses, etc.
* Created a climate accepting of various opinions and differences
* Knew students in class by name
* Responded to student reactions and questions
* Provides individual attention when requested
* Talked about personal life, examples
6 Available during office hours

6	Available at other times and places besides office hours
7	Present and available before and after class
8	Corrected students misbehaviors (talking, etc.)
	Makes student's answers sound smart
	Provided constructive criticism

Described ineffective teachers:

5	Had limited or no interaction
*	Put down students or seemed upset by questions
9	Seemed oblivious or unaware to class
9	Ignored students who raised hands
7	Came late and left immediately after class
*	Didn't respond to phones calls and messages
8	Ignored student misbehaviors (talking, etc.)
	Got too personal with students
	Showed favoritism to certain students
	Became more confusing when questions were asked
	Sent students to TAs rather than helping them

Outcomes--Perceptions of learning that occurred:

Described effective teachers:

10	Learned the material, well and easily
*	Learned an appreciation of topic and the professor
*	Learn to think, speak up, support ideas for yourself
*	Learned life applications
	Learned something about people skills
	Learned how to teach this particular material effectively

Described ineffective teachers:

*	Had to learn everything on your own (through homework, old tests, or TA)
10	Learned little or nothing
*	Learned to dislike the subject
	Learned to warn others about professor and to pick them carefully

Miscellaneous:

Described ineffective teachers:

There were no repercussions for being ineffective
TAs become go-betweens from class to professor

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[1] Items marked with the same number were used to create a single theme for the q-sort.
* Indicates themes selected for the q-sort.

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Table 2: Types of Effective Teachers in Small Classes

Interpersonal Teacher (77%)	Structured Lecturer (11%)	Synthesizing Teacher (11%)
Strong agreement -knowledgeable (1.62) -asked for students' ideas, opinions, or responses (1.32) -down to earth with students (1.24) -knew students by name (1.16) -used humor (1.01) -included personal stories (1.00) -used discussion to lead the class (.96)	Strong agreement -knowledgeable (1.99) -followed a syllabus (1.86) -available outside of class (1.71) -connected class periods, readings, and tests (1.49) -knew students by name (1.49) -primarily lectured (1.33) -clear what would be tested (1.23)	Strong agreement -made it clear what would be on tests (2.19) -connected class periods, readings, and tests (1.67) -down to earth with students (1.46) -tested general concepts, not specific details (1.14) -followed the syllabus (1.01) -used humor (1.00) -available outside class (1.00)
Strong Disagreement -lacked knowledge or confidence (-1.77) -standoffish (-1.66) -avoided interaction with students (-1.33) -were unaware of students (-1.30) -learned very little (-1.43) -learned to dislike the subject (-1.22) -spoke in a monotone (-1.00)	Strong Disagreement -lacked knowledge or confidence (-2.32) -did not follow syllabus (-1.88) -class periods and readings seemed unrelated (-1.19) -seemed to prefer research to teaching (-1.18) -spent too much time on individual concepts (-1.09)	Strong Disagreement -left students to learn on their own (-1.62) -expects students to know and do more than was reasonable (-1.45) -ignored students who were misbehaving (-1.24) -lacked knowledge or confidence (-1.11) -tests were too hard or too long (-1.11) -seemed to prefer research to teaching (-1.00)

Table 3: Types of Effective Large Class Teachers

Student-Centered (70%)	Eloquent Lecturer (12%)	Synthesizing Teacher (14%)	Subject-Inspiring Teacher (3%)
Strong agreement -down to earth with students (1.27) -concerned about student learning (1.26) -used personal stories or examples (1.12) -frequently asked students for opinions and ideas (1.06) -made it clear what would be tested (1.00)	Strong agreement -primarily lectured (1.58) -appreciated the subject and the instructor (1.46)	Strong agreement -learned to appreciate subject or instructor (1.74) -down to earth with students (1.55) -connected class periods, readings, and tests (1.48) -made application to students' lives (1.45) -concerned about student learning (1.38) -primarily lectured (1.33) -made it clear what would be tested (1.33)	Strong agreement -learned to appreciate subject or instructor (1.97) -down to earth with students (1.58) -made application to students' lives (1.18) -used personal stories and examples (1.18)
Strong Disagreement -lacked knowledge or confidence (-1.89) -standoffish or condescending (-1.60) -puts students down for asking questions (-1.50) -did not interact with students (-1.26) -avoided eye contact (-1.16) -expects students to know and do more than reasonable (-1.11) -spoke in a monotone (-1.10) -learned disliked subject (-1.09) -unaware of students (-1.06)	Strong Disagreement -lacked knowledge or confidence (-2.35) -difficult to understand (-1.92) -divided the class into small groups (-1.54) -did not follow syllabus (-1.38) -avoided eye contact (-1.35) -read from notes (-1.21) -knew students by name (-1.18) -spoke in a monotone (-.98)	Strong Disagreement -lacked knowledge or confidence (-1.94) -readings unrelated to class (-1.38) -learning disliked subject (-1.21) -tests too hard or long (-1.18) -put students down for asking questions (-1.14) -difficult to understand (-1.13) -cover too much material (-1.09)	Strong Disagreement -avoided eye contact (-1.97) -standoffish or condescending (-1.97) -left students to learn on their own (-1.58) -spoke in a monotone (-1.58) -seemed to prefer research to teaching (-1.18) -put students down for asking questions (-1.18) -unavailable to students before and after class (-1.18)

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Table 4: Ineffective Teachers in Small Classes

Distant-Abrasive Teacher (50%)	Reader (21%)	Unrealistic Expectations (21%)	Unavailable Teacher (5%)	Tedious Teacher (3%)
Strongly agreement -standoffish or condescending (1.51) -learned very little (1.39) -puts students down for asking questions (1.36) -dry or dull (1.35) -difficult to understand (1.28) -on their own to learn (1.22) -learned did not like subject (1.20) -tests too hard or long (1.19) -monotone voice (1.13) -did not follow syllabus (1.12) -lacked knowledge or confidence (1.12)	Strongly -dry or dull (2.38) -learned little (2.03) -primarily lectured (1.90) -in a monotone voice (1.61) -knowledgeable (1.60) -primarily read notes (1.49) -unaware of students (1.49) -learned did not like the subject (1.45) -followed the syllabus (1.44) -ignored student misbehaviors (1.04)	Strongly -difficult to understand (2.12) -expected students to know or do too much (2.10) -learned did not subject (1.71) -tests too hard or too long (1.44) -covered too much material (1.42) -left students to learn on their own (1.37) -standoffish or condescending (1.34) -knowledgeable (1.18) -spoke too fast (1.16) -followed the syllabus (=1.14) -learned little (z=1.07)	Strongly -standoffish or condescending (2.11) -learned very little (1.99) -did not return calls or messages (1.90) -put students down for asking questions (1.77) -not available before or after class (1.65) -preferred research to teaching (1.52) -knowledgeable (1.44) -on their own to learn (1.42) -read from notes (1.37) -tests too hard or too long (1.16)	Strongly -primarily lectured (1.97) -connected class periods, readings, and tests (1.97) -dry or dull (1.58) -knew students' names (1.58) -put students down for asking questions (1.58) -spoke too fast (1.18) -covered too much material (1.18) -followed syllabus (1.18) -clear what would be tested (1.18) -prefers research to teaching (1.18)
Strongly Disagreement -energetic and enthusiastic (-1.71) -comfortable climate (-1.46) -seemed approachable (-1.45) -learned to appreciate subject or teacher (-1.32) -uses examples or stories (-1.24) -unaware of students (-1.05) -available outside class (-1.04) -connected class period, readings and tests (-1.01) -provided individual attention as needed (-1.01)	Strongly Disagreement -energetic and enthusiastic (-1.87) -aware and responsive to students (-1.60) -lacked knowledge or confidence (-1.56) -applied subject to students' lives (-1.36) -used audio-visual aids (-1.09) -put students down for asking questions (-1.09) -did not follow syllabus (-1.04) -provided opportunity to learn to defend positions (-1.05) -learned to appreciate subject or instructor (-1.03)	Strongly Disagreement -learned to appreciate subject or instructor (-1.86) -comfortable climate (-1.66) -casual/approachable (-1.35) -divide the class into smaller groups (-1.35) -used stories or examples (-1.32) -provided opportunity to learn to defend positions (-1.28) -made applications to students' lives (-1.10)	Strongly Disagreement -approachable (-1.57) -aware of students' responses (-1.46) -available during office hours (-1.31) -connected class periods, readings and tests (-1.25) -provided individual attention as needed (-1.22) -learned to dislike the subject (-1.22) -ask for student ideas and opinions (-1.12)	Strongly Disagreement -divided class into small groups (-1.97) -provided individual attention (-1.97) -asked for students' opinions (-1.58) -energetic and enthusiastic (-1.58) -did not follow syllabus (-1.58) -used stories or examples (-1.18) -used demonstrations (-1.18) -used discussion (-1.18)

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Table 5: Types of Large Class Ineffective Teachers

Distant, Awkward Teacher (28%)	Unclear and Unrealistic Expectations Teacher (27%)	Distant, expert teacher (31%)	Personable, reader (3%)	Disconnected Teacher (11%)
Strongly Agreement -dry or dull (1.75) -learned little (1.72) -difficult to understand (1.66) -put students down for asking questions (1.55) -on their own to learn (1.45) -expected students to know and do too much (1.20) -too much material (1.19) -standoffish or condescending (1.18) -did not like the subject (1.11) -talked too fast (1.06) -did not interact with students (1.03)	Strongly agreement -tests too hard or too long (1.79) -knowledgeable (1.63) -learned little (1.63) -on their own to learn (1.58) -expected students to know or do too much (1.47) -primarily lectured (1.45) -too much material (1.45) -colorful or unusual (1.40) -standoffish or condescending (1.26) -frequently off on tangents (1.21) -did not like the subject (1.15)	Strongly agreement -dry or dull (2.06) -knowledgeable (1.70) -interacted with students during class (1.67) -primarily lectured (1.65) -monotone voice (1.61) -learn on their own (1.41) -difficult to understand or hear (1.27) -followed syllabus (1.23) -unaware of students during class (1.13) -ignored students who misbehaved (1.09) -expected students to know or do too much (1.03) -gave tests that were too hard (1.00)	Strongly agreement -primarily lectured (1.85) -reading from notes (1.69) -frequently off on tangents (1.64) -learned little (1.63) -approachable (1.57) -frequently asked for student input (1.47) -included personal stories (1.39) -dry or dull (1.17) -used examples and stories (1.16) -comfortable climate (1.14)	Strongly agreement -on own to learn (2.14) -learned little (2.12) -tests too hard or long (2.10) -expected students to know or do too much (1.70) -learned not like subject (1.55) -dry or dull (1.20) -too much material (1.19)
Strongly Disagreement -concerned about student learning (-2.01) -comfortable climate (-1.69) -energetic and enthusiastic (-1.36) -knew students by name (-1.26) -applied to students' lives (-1.24) -learned to appreciate subject/instructor (-1.19) -down to earth with students (-1.17) -knowledgeable (-1.14) -approachable (-1.07) -aware of students reactions (-1.01) -used stories or examples (-1.01)	Strongly Disagreement -learned to appreciate subject/instructor (-1.61) -lacked knowledge (-1.52) -down to earth with students (-1.36) -connected class, readings, and tests (-1.34) -ask for student input and ideas (-1.34) -comfortable climate (-1.29) -aware of students' reactions (-1.24) -make it clear what would be tested (-1.23) -concerned about student learning (-1.22) -applied to students' lives (-1.16) -follow an outline (-1.14) -learned to defend positions (-1.10) -tested general concepts, not details (-1.10) -casual/approachable (-1.03)	Strongly Disagreement -energetic and enthusiastic (-1.94) -laked knowledge or confidence (-1.47) -used humor (-1.46) -not aware of student responses (-1.39) -down to earth with students (-1.35) -concerned about student learning (-1.24) -learned to appreciate the subject or instructor (-1.20) -moved around (-1.12) -colorful or unusual (-1.11) -knew students' names (-1.07) -approachable (-1.04) -asked for student input (-1.03)	Strongly Disagreement -put students down for asking questions (-2.35) -standoffish or condescending (-1.81) -expected students to know or do to much (-1.50) -tests too hard (-1.37) -spend too much time on individual concepts (-1.24) -avoid eye contact (-1.19) -used humor (-1.17) -used audio/visual aids (-1.08) -difficult to understand or hear (-1.07) -divide the class into small groups (-1.04) -did not follow syllabus (-1.03)	Strongly Disagreement -clear what would be tested (-2.60) -learned to appreciate instructor/subject (-1.98) -connected to students' lives (-1.79) -connected class periods, readings, and tests (-1.67) -tested general concepts, not details (-1.54)

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